DOCUMENT RESUME

ED 062 691 EA 004 173

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TITLE Innovation and Change in Public School Systems.
INSTITUTION Peterfreund (Stanley) Associates, Inc., Englewood Cliffs, N.J.
PUB DATE Jan 70
NOTE 37p.

EDRS PRICE MF-$0.65 HC-$3.29
DESCRIPTORS Administrative Problems; Administrator Role; Communication Problems; *Decision Making; *Educational Change; *Educational Innovation; Educational Objectives; Educational Policy; *Educational Research; Management Systems; *Public School Systems; Relevance (Education); Staff Role; Superintendent Role; Teacher Attitudes; Teacher Role

ABSTRACT

This document contains highlights of three years of research begun in 1967 that probed the decisionmaking structure of the education field, its politics, people, and forces. Twenty-five public school districts were studied and visited in the course of this research; nine districts were studied and analyzed in depth. A study of occupational dynamics, the research emphasized explaining and analyzing the roles of each member of the educational establishment, and concentrated on innovation in public school systems. The study attempted to identify the most influential factors that lead to innovation and to define the problems that inhibit change in education. (Author/MLF)

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INNOVATION AND CHANGE IN PUBLIC SCHOOL SYSTEMS

by

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EA 004 173

JANUARY 1970

TABLE OF CONTENTS

Page

FOREWORD

About This Study. i

The Study Sample. ii

HIGHLIGHTS. 1

THE CONDITIONS FOR CHANGE

#1: Goal Definition. 5

#2: A Strong Superintendent. 7

#3: Effective School-Level Leadership. 9

#4: "Good" Teachers. 11

#5: Management Organization And Systems. 16

#6: Astute Financial Management. 21

#7: Dissatisfaction With Status Quo. 24

THE CONCEPT OF MEASURING INNOVATION IN A SCHOOL SYSTEM. 28

FOREWORD

About This Study

This document is intended to communicate, to the persons in 25 school districts which participated in these studies, the highlights of three years of research beginning in 1967 by Stanley Peterfreund Associates, Inc., in the public school education field. The overall aim of the research was to develop a greater understanding of trends and relationships in public school systems (in grades K-12). More specifically, the study probed the decision-making structure of the education field, its politics, and the people and forces which influence them. This was a study of occupational dynamics, with emphasis on explaining and analyzing the roles of each member of the educational establishment. Within this context, the research also concentrated on innovation in public school systems, to identify the most influential factors which lead to innovation and to define the problems which inhibit change in education.

Of the 25 public school districts which were studied and visited in the course of this research, nine were studied and analyzed in depth. Five of these nine districts were visited twice in the three years, to identify trends and changes.

Extensive interviews were conducted with superintendents, principals, teachers, school board members, and parent leaders in these districts. In addition, the research team visited school facilities, observed classes, toured communities, and collected a variety of printed data about the districts and the communities.

Interviews with all respondents were confidential and no respondent or school district is publicly identified in any report of the findings.

The field research and the report documents are the results of the collaborative efforts of the principals and associates of this firm, including Stanley Peterfreund, Mary D. Beatty, Eric Langbaum, Thomas M. Calero, and Hrach Bedrosian.

The Study Sample

School districts sampled included over 25 different city and suburban communities in the East, the Midwest, the South and the Southwest. Community characteristics varied considerably, in terms of income levels and racial and ethnic composition. The school district reputations ranged from poor to outstanding. All in all, these districts represented about one million students and some 1200 schools.

In these school districts, top administrators, school board members, principals, teachers, and parent leaders were interviewed. The findings reported in this document are based on interviews (and re-interviews) with over 400 individuals in these districts. In one district, in addition to face-to-face interviews, a teacher questionnaire was pretested by 76 respondents.

Overall Summary Of School Districts And Respondents (1967-69)

In total, the coverage includes:

	1967	1969	Total
Superintendents, Assistants, Central Staff	24	34	58
Principals	53	32	85
Teachers (Interviews)	-	151	151
Teachers (Questionnaire)	-	76	76
School Board Members and Parent Leaders	54	10	64
Other Professional Staff	-	9	9
	131	312	443

This is exclusive of about 50 teachers, administrators, and aides contacted in 1968, in a separate study of an innovative experimental program. The results, therefore, are based on personal contacts with about 500 individuals.

HIGHLIGHTS

The majority not only express a willingness to change, but equally important, they tend to react favorably more often than not to new approaches to teaching (such as team teaching, inductive learning methods), to more relevant curriculum, and to the changes in attitude displayed by the students, themselves.

In the midst of social and economic ferment in the environment in which they operate, those who comprise the public school establishment recognize that their institution is no less subject to criticism currently than is any other institution in our society today. They recognize that change is required -- both in terms of the schools' functions and in terms of the speed and magnitude of response the schools must make to the problems with which they must cope.

The principal dilemma today is how to change, and how to manage change successfully. There is evidence that change and innovation have already begun to occur at a significantly more frequent and rapid rate than one would anticipate, in view of the field's traditional reputation for inertia and conservatism. Forces both inside and outside the establishment are accelerating the movement away from the traditional to a more innovative mode of operation. And yet, the signs of progress are far from consistent; a variety of problems make the task of achieving quality education appear almost insurmountable to some school districts. Yet, in other districts, change is occurring more rapidly, and genuine innovation is taking place, although some of these same problems exist. Certain conditions are present in these innovative districts that distinguishes them from others; it is the identification and description of these conditions upon which this report will concentrate.

Defining Innovation

Innovation, as we are using the word in referring to the public schools, refers to the introduction, adoption, and/or implementation of something that

is considered a departure from the traditional, conventional, or norm. Innovation is a relative concept in that newness is as much dependent on attitude as it is on fact. There are those who would maintain there is little new in some of the much heralded innovations in public schools today; yet, pragmatically, they are innovations because the establishment views them as such against their own norms. Recognizing that it is most unusual for a public school district to have or make funds available for research and development, innovation in a school or district only rarely implies invention, or the development of a unique new idea, method, concept, or device. What is viewed as innovative in any given school or school system depends on what is and has been done conventionally in that district. Similarly, at some point what was viewed in an earlier year as innovative becomes the norm, and is accepted as conventional.

The Conditions Or Prerequisites For Innovation

Thus, innovation is a dynamic concept, in which the attitude toward change is the constant. Finding a particular new device or program in use is not, in and of itself, indicative of innovation; it is merely symptomatic. What does distinguish those districts or schools which are innovative, from the rest, is the degree to which a district or school contains these necessary conditions or prerequisites for innovation:

(1) The existence of formal goals, which set the climate and the tone. The innovative school system has a defined, articulated set of objectives, a philosophy which has a central theme.

(2) A strong superintendent, whose leadership style supports innovation, and who, himself, is either the author or implementor of the school system's goals.

(3) Effective leadership on the school level; principals who are in tune with the district's objectives and skilled at involving and motivating the teachers.

(4) A teaching staff that understands its role as being that of enabling students to learn, and has the ability to recognize individual students by their differences and the flexibility to be responsive to these differences, as well as to the environment of the school and community.

(5) A management system that is organized to permit the implementation of goals, that is administratively geared to support the district's educational programs, and is structured to sustain a communication climate in which ideas can flow up and down the line.

(6) Financial resourcefulness; the ability to secure funds from supplemental sources, to retain discretionary control over their utilization, and an orientation toward buying the most for their money as opposed to simply seeking more money to buy more.

(7) Dissatisfaction with the status quo; a constant attitude of seeking to improve, to question, to evaluate, to be dissatisfied with the visible results of conventional approaches.

Given a school district which meets all of these conditions, the likelihood is that it will be innovative. To the degree that any or all of these conditions are lacking in a school district, its propensity to innovate diminishes.

Factors Which Do Not Correlate With Innovativeness

Further, this study on innovation in the public schools indicates other factors which are not predictive of the innovativeness of a school district:

(1) Location (by urban, suburban, or regional characteristics) does not distinguish an innovative district from a traditional district. We found urban systems organizing for innovation and suburban schools dedicated to not rocking the boat.

(2) Size is not a predictor in terms of the following:

- Number of students in the district
- Number of schools
- Average number of students in a classroom
- Number of staff in central administration
- Number of members on the school board

(3) Neither the overall size of the budget, nor the operating cost per student seem predictive of innovativeness. As an example, the most traditional minded district in this study had the highest operating cost per student.

(4) Community characteristics in terms of income, occupation, and total population are not in themselves predictive of innovation, unless some exceptionally unusual circumstances exist.

(5) Finally, the following characteristics about the student body are not predictive of innovation:

- Range of abilities
- Educational or academic goals
- Racial balance
- Economic background

Propensity To Innovate Can Be Measured

If, as we have stated, these relationships and conditions exist, then it follows that it should be possible to develop research tools to identify and measure them. Since some of these factors are objective and factual, an audit that identifies their presence or absence can be made on an objective, fact-gathering basis. Since others are attitudinal factors, or matters of relationships and philosophy, these too can be measured by using survey techniques to study and measure the relevant opinions and attitudes.

Further, since all of the research to date indicates that change within the public school establishment is produced or inhibited primarily by forces of influence within a school district, or even within a single school, we are dealing with a finite, measurable entity, and not with the national picture at large. While it's true that national economic policy, state politics, or political legislation can -- and do -- have an impact at a local level, the primary factors which affect innovation are local in nature.

Evaluation has been and is a frustrating enigma to many educators. Coupled with their resentment of people from outside their domain coming in to evaluate them, is their lack of agreement about what should be measured against what criteria. But the concept of researching and measuring a school system's propensity to innovate in the sense it has been described here has value because it is self-evaluation, and the criteria is self-determined. The benefit to the school district would be increased self-knowledge, forecasting not only the rate or the velocity with which the district is likely to move from the traditional to the innovative, but also identifying the factors which are most likely to prevent change and innovation from taking place.

THE CONDITIONS FOR CHANGE

#1: Goal Definition

> "In this school system, the individual child must receive prime consideration. The philosophy of this system must embody an awareness of the need for a wholesome self-concept, individual goals, and an environment which lends to each person a feeling of dignity and respect." (From a school district brochure)

The existence of formal goals which set the climate and the tone for a school district is a necessary condition for change. Without a defined, articulated set of objectives, based on a central philosophy, a school system cannot come to grips with educating a changing population in a changing society. It cannot function, without goals, in a cohesive, unified way.

But, the presence in a school system of formally stated goals does not of itself assure the commitment necessary to achieve those goals.

- In one district visited, just one goal in a long, admirably worded statement of objectives calls for "equal and adequate services available to all." The disparities between equal and adequate services throughout this large city system defy description. The reasons for the gap between the idea and the reality lie in the lack of other factors such as management and leadership, as well as in an environment plagued with poverty, racial tension, and political domination.

And, other school districts have goals formally stated or implicitly observe which typify their commitment to the past, or to what the educators interpret as the community's desires.

- As one superintendent stated it for his district, the goal was to offer the students in that advantaged community the things they need to get them into college.

- And another nearby community, not so advantaged, expressed their desire to provide the same kind of education that "the really rich suburban kids get in their districts."

What the innovative school districts have in common is a central theme running through their goals, a theme which embodies a number of concepts which emphasize the need to recognize change and adapt to change in order to effect change:

- The need to establish in the student a wholesome (or positive) self-concept; that is, an image of himself that gives him dignity and worth. (In urban school systems which have large numbers of minority groups who are poor and disadvantaged in any number of ways, the lack of self-worth is a particularly difficult barrier, which prevents learning, say educators. Yet, this concept as an objective is stressed with equal importance in a number of affluent suburban school systems, as well.)

- The need to design an educational program which provides for individual differences -- which recognizes that students must learn each according to his own capacity, at his own rate, that which he needs to prepare him for whatever role in society he is capable and desirous of achieving.

- That such a system would therefore need to continuously redefine its academic as well as its occupational objectives.

- That also, given these objectives for its students, a school system needs to recognize when an environment is hostile to the student and develop alternate approaches to overcome such barriers to learning as poverty, discrimination and alienation. (In one school system, the alternate approach centered on reviving and supporting the cultural traditions and background of a foreign speaking minority to stimulate pride and to preserve those customs which have value to them.)

- The innovative school system recognizes the need to relate its goals to the community it serves.

A guiding factor for many school systems is the need to be relevant in what they do educationally, in light of not only shifting values but of shifting populations as well.

- The school system which used to send the majority of its high school graduates on to the college of their choice and now has less than half who even contemplate college studies must provide today's students with different skills, saleable skills which benefit the community and the student.

- While relevancy in itself is not a new concept in education, a renewed commitment to relevancy was found in the goals of every district that might be considered innovative, in this study.

#2: A Strong Superintendent

> "When our current superintendent came here, he revolutionized this district. He's constantly examining new programs. He has excellent contacts with other educators. He's willing to spend money on new things. He generates enthusiasm among the staff. He's an independent man and he is secure enough to make courageous decisions." (An assistant superintendent)

A strong superintendent is an essential -- if not the most influential -- condition for change in a school district. It is his leadership, most often, which sets the tone of the school system.

The innovative superintendent must command respect and support from the school board and be in full control of the educational program. This is not to say that once having gained support and respect from the school board, the innovator is able to sustain the relationship indefinitely.

- In one district visited, the superintendent, described as "an educational visionary," caused innovation to happen despite the increasing objections of some of his board and staff and public. He built an educational structure which in building design, teaching methods, and student preparation is so committed to individualized instruction, that there is no turning back. But the price was his job.

- In another district, a new superintendent who had spent his first year in changing the atmosphere in his traditional, conservative small city system from lethargy to controversy, was faced with dismissal by a majority of his school committee. They felt he was "too progressive," an "outsider," and they "didn't understand" what he was trying to do. Yet, the public, at least in some quarters, approved the changes he wanted to effect so they became his support and elected a new committee which gave the superintendent his mandate for change and innovation.

Interestingly, despite school board members' own definition of their policy-making role, what that role boils down to, especially in terms of innovative programs, is the board's evaluation of a person -- the superintendent -- rather than a program. If the board has faith in the man, the program is in; if not, usually it is the superintendent who is out.

> "The superintendent is great. He doesn't let people bully him around. He's very personable and communicates very well with the staff. He's very child-oriented as far as what's best for the schools." (A teacher)

Leadership and motivation of the professional staff is one of the qualities of the innovative superintendent. Despite the fact that in most districts visited, superintendents rarely visited classrooms or even held meetings with all levels of their staffs, the innovator's influence does extend into the classroom. It was particularly interesting to hear teachers in some districts reflect not only the educational theories of their superintendents (often using the exact phraseology we had heard from the superintendent himself) but also express their enthusiasm and commitment to those goals. In part, the recruiting policy of the district is a factor, especially if the superintendent sets the qualifications for the staff, even if he does not personally recruit teachers and other staff.

As leaders, superintendents can lead reluctant principals, teachers and other staff into change, and they can reinforce and encourage those innovative principals and teachers already on the staff. Yet, it should be noted that in order to accomplish these goals, internally, the innovative superintendent actually spends the bulk of his time on externally-oriented matters, dealing with the board, the public, state legislatures, other government agencies and the like. The superintendent is -- and must be -- a political person.

Mobility is sometimes characteristic of the innovator, too. Frequently, the superintendent is himself a catalyst for change in that he recognizes the challenge in coming to a school system on the verge of change; he has a belief in the necessity for moving that system through a crisis, and then having accomplished his objectives, he moves on to other challenges. Yet, he leaves converts in his wake -- the public, board members, principals, teachers -- from whom new leadership emerges to continue the process of change and innovation.

The innovative superintendent is often the author of the system's goals, and at the very least, the implementor. There is striking similarity in the very wording of the statement of goals in some school districts resulting not only from a common philosophy on the part of the superintendent but also from the influence they have upon each other. Assistants who serve in one district and move to the top spot in another carry with them the beliefs and experiences they gained under another's leadership. Coupled with their mobility (the average tenure of the superintendents we interviewed was just over three years), this dispersion of philosophy and leadership creates a network of innovative superintendents who know each other and who are aware of what other districts are doing and who identify a district by its leadership as much as by its other characteristics.

#3: Effective School-Level Leadership

> "One of our contributions to innovation is not getting principals and other people down the line all choked up. But it's more important to have principals like the two men you met. One is only two or three years from retirement but he is more progressive than almost anyone I know who is half his age. The other guy is a young man all charged up to innovate. The two are a real contrast in age but are buddies under the skin when it comes to shaking up the system and doing something different." (A superintendent)

The school system must have principals who are in tune with the district's objectives and who are skilled at involving and motivating their teachers.

The innovative principal should have these qualities:

- The ability to introduce innovation into their schools. Whether he has hand-picked his staff or not, the innovative principal is able to identify those teachers who will assist and support the innovation. He is also able to neutralize or even deflect staff opposition. One principal put it this way:

> "When I noticed the resistance to change in our staff meetings, I got people off on the side to find out why. One smart young teacher told me that I talked too much and was too fast with my criticisms or reactions. So I tried to improve and it loosened up the atmosphere. A couple continued to resist, but group pressures built up."

- The ability to motivate and involve their teachers in the whole process of innovation is an essential leadership quality. Rather than impose a program on the teachers, the principal seeks, even demands, a contribution from his staff in designing and implementing it in that school.

> "It's important to build self image and involvement with the staff. Every idea becomes the staff's idea. Before you know it, they start pushing you to change. You have to give them the opportunity to fail and to learn why. You have to stay close to your staff. It takes a lot of time."

Innovative principals identify their role in terms of educational leadership, of creating an environment for learning. They are less concerned with traditional administrative routine. Leadership implies good communication with the staff, the students and the community, and these principals have a communication system which allows information and ideas to flow up and down the line. Often, they have to be ingenious to overcome limitations in the size of their staff and the restrictions on their time.

Whether or not the district is innovative, school principals are generally in command in their schools. They are free to run their schools as long as they operate generally within the confines of district policy. Part of this freedom stems from the fact that superintendents exercise very little direct control at the building level. Thus, principals say they are free to innovate, if they choose to do so. But, so much of their time is occupied with administrative routine that despite the degree of freedom the principals have, by virtue of their jobs, they become bogged down in trying to solve today's problems. With only a few exceptions, they say they have little or no time to devote to long range planning for innovation and although they are committed to change, they say they seldom have time to implement their objectives.

For example, the following chart shows the rank order of what the principals identified as being most important versus how they actually spend their time:

Ranked In Order Of Importance	Principal's Role	Ranked Actual Time Spent
1	Supervisor of teachers	3
2	Developing individual child	5
3	Public relations	2
4	Administration	1
5	Educational leader	6
6	Innovator	8
7	Curriculum development	7
8	Student liaison	4

#4: "Good" Teachers

> Superintendents, principals, school board members, and parent leaders indicted their teachers for being the major barrier to change and innovation in school systems; resistant to change, afraid of change; resistant to technology, afraid of it, ignorant of it; ill-prepared educationally, and even uneducated; misfits, drawn to the education field because they could not do anything else; not as well motivated or as dedicated as in the past; too demanding in salary expectations and working conditions; and unprofessional in behavior.

As might be expected, the image the teachers have of themselves is quite different from the profile drawn by others in the establishment. While teachers themselves, in our interviews, confirm some of these charges, they put them in a somewhat different perspective. Other charges are plainly refuted. Thus, the teachers say:

- Teachers are and can be a barrier to change and innovation, because they are poorly prepared for innovation by their administrators. Change is thrust upon them without training, communication, involvement, or evaluation.

- (The lack of teacher involvement is the single most frequent cause of failure to successfully implement innovation in the districts we studied.)

- Teachers talk as often as administrators do about the need to change; the question they want answered is how they implement the change. How do they get the help and training they need to change.

- Rather than being resistant to change, teachers are grasping for help and guidance in an era of change. They are aware that change is taking place. The effort to individualize instruction, the change in teaching methods to accomplish this, and the change in children and society were mentioned, by virtually all teachers interviewed, as having the biggest impact on education generally. Change to teachers clearly means personal change in terms of their need to serve a different kind of student in a more demanding society.

- Ignorance of technology -- the computer particularly -- is greater than any resistance to using computers in education. Apart from those who now use it or who have been exposed to courses, projects, etc., few teachers can envision widespread use of computer assisted instruction, because they have never seen a computer, or a demonstration of its uses or effectiveness. If the computer has any reputation at all among the uninitiated, it is bad; they have heard about the mess in scheduling, the payroll errors, and the countless "threats" that computers will make teachers obsolete. It is against this background that teachers unfamiliar with computers, reject the computer in the instructional process. On the other hand, once exposed -- and few have been thus far -- teachers become enthusiastic, to the point where in at least several of the districts visited, the use of the computer for educational purposes was teacher-inspired.

- The simpler technological devices and equipment now available to teachers are used if they are accessible to the classroom. Just using overhead projectors and film and slide projectors is no problem to teachers; it is having the software materials and the equipment in the appropriate place, at the appropriate time. There is a trend among some teachers to use these devices as an integral part of the curriculum rather than as an occasional supplement or diversion from standard curriculum.

- Teachers agree that in general, teacher education did not adequately prepare them for the realities of the classroom. They are perhaps even more critical than administrators and tend to offer more concrete suggestions for improvement. Their chief criticisms of teacher education:

    - Practice teaching and classroom observation should be done earlier.

    - The gap between academic study and what actually goes on in the classroom is wide

    - Courses in education are out of date.

- Few (or no) courses on audio-visual materials and equipment are available at the college level.

- There were no courses available on computers in their colleges.

- They scored education professors who taught courses about innovation, the need to individualize, but who themselves used a straight lecture technique, one textbook (often their own), and standardized tests for their students.

- Nor are teachers "misfits" who could not "make it" in the commercial world. For two-thirds of these teachers, their first career choice was teaching. About a fifth came to teaching after full-time experience in a variety of business occupations. Eight out of ten say that they are satisfied with teaching as a career.

- Motivation and dedication are not lacking among the teachers in these districts. The real meaning of the charge that "teachers lack old-fashioned dedication" may well be that the administrators are expressing a nostalgia for the past, when teachers did exactly what the administration allowed them to do, and now teachers do not passively accept the status quo.

- The argument that teachers are demanding in salary expectations and working conditions must be viewed in the light of actual salaries paid, and the working conditions commonly observed. Teachers feel, almost universally, that they are underpaid, even considering the shorter work year. They deplore the need to moonlight (over a third do), and have the attitude that they are making a financial sacrifice by remaining in teaching. And yet, despite the intensity of the salary drive and the notoriety of strikes, the teachers' expectations of improvement are modestly low.

- The quest for professionalism among teachers is rising and is directly related to the new-found power of teacher associations. Rather than losing or lacking professional attitudes, teachers are discovering that through a strong and active association they can act as a professional group. Although associations (and unions) have concentrated on improving salaries, they are increasing their activities in setting evaluation standards, debating tenure questions, merit versus step-by-step salary increases, the design and approval of curriculum, and a host of other policy matters formerly the sole perogative of the administration. The strength of collective association has given teachers a new confidence and has enabled many of them to develop in themselves (and for their profession) what they strive to develop in their students -- a positive self-concept.

What distinguishes the innovative district from others is the degree to which teachers have a clearly defined perception of their role -- that of enabling students to learn, having the ability to recognize individual students by their differences and having the flexibility to be responsive to these differences, as well as to the environment of the school and community.

Further, by their own definition, as well as administrators', the characteristics of the "good" teacher -- the implementor and supporter of change -- can be profiled:

(1) Satisfaction with teaching. Although the overwhelming majority of the teachers in this study say they are satisfied, overall, with teaching as a career, the elements which make up the sense of satisfaction help to distinguish certain teachers from the group as a whole. These teachers talk about the creativity, variety, excitement, and rewards they have personally experienced. They genuinely like children, and find working with children interesting. If they are frustrated or baffled, the causes come from the impediments to doing a good job rather than from the job itself. They are not defeated by enormous social and financial problems they often face in the classroom and the school. They identify the changes in their environment and the personal changes they have made to function in a new or different environment. The changes have often increased their enjoyment of teaching.

(2) The desire to be successful. Success in the classroom -- their ability to enable students to learn and be successful is a definite goal. How they define success and how they measure success is important, too. The method, the curriculum, is successful if the student learns. Success is focused on the students as individual learners.

(3) How good teachers define the role of students. Teachers encourage children to have a participative and responsible role in the learning process. They can distinguish between different styles of learning behavior in students and teach to those styles. They gain acceptance from their students. Teachers identify individuals in the class, rather than the class or even groups in the class.

(4) They can define the role of the teacher. Teachers view their primary function as enabling students to learn. They are aware of how the learning process functions, of cognitive and affective operations in learning. They are organized to perform their role. They set objectives and are able to measure the accomplishments of their objectives. They recognize the changes taking place in the teacher's role.

(5) They want to be involved in their schools and in their districts in design and planning. Passive acceptance of curriculum methods and media is not characteristic of the good teacher. The classroom process and the student-teacher interaction influence the teachers' attitudes about how other parts of the system operate. Teachers want in on decision-making, especially in areas which directly affect the way in which learning occurs and what is to be learned.

(6) They are well informed about their students, their school, the district, and their field -- and they want to know more. Their sources of information are authentic as well as varied. They seek out new ways to get more information and they know what information they want and need.

(7) Attitudes about in-service training, and seminars, and professional development. Teachers seek out and make use of opportunities to acquire skills and information in in-service courses. They are able to identify the kind of help or training they need. They have a belief in continuous training and self-development.

(8) The kinds of problems they mention. These are teachers who talk about learning problems rather than students' failures to perform at a prescribed level. They feel discipline is a function of knowing how to learn. Faced with seemingly insoluble problems, they can come up with ingenious circumventions which, if they do not solve the problem, at least alleviate the situation to some extent.

(9) What they use and do in the classroom. The absence of rigidity in schedule, curriculum, and manner identifies good teachers. They seek out and learn to use a variety of media in teaching. They are organized on a weekly and a daily basis so that they can create an orderly environment in which children can learn. They are concerned about the learning environment generally.

(10) The sense of professionalism. They identify themselves as professionals -- that is, they have specialized knowledge which is the result of intensive academic (or self) preparation. They have a loyalty to their field, rather than to their specific job in a specific district. The practice of their profession is their first career choice. They are concerned about and involved in the standards within their sphere of professionalism. They want to be rewarded on the basis of their performance, they want to be involved collectively -- through professional associations -- in shaping the education environment.

#5: Management Organization And Systems

> "The whole idea of the systems' approach in education is new. A big successful corporation has a hierarchy of personnel, facilities, training, and performance objectives. They know when their objectives have been achieved. Educators look at these objectives longingly." (An administrative director)

To accomplish innovation, the school district needs a management system that is organized to permit the implementation of its goals, that is administratively geared to support and forward the educational program.

By the educators own testimony and by our observations, a major problem in most school districts is the lack of managerial skills. The administrative structure of the school district and the thinness of its managerial ranks inhibit the process of change.

- In many school systems, the only line manager between the superintendent and the teachers is the school principal. Often, the central staff in personnel and curriculum areas do not act in supervisory positions but perform mainly support and service functions. The effect of this in one district has been, in the words of a principal, "108 schools and 108 different philosophies."

- The training of school administrators is inadequate, even outdated, say many of the principals and central staff people. The lack of managerial techniques, even tools, is sorely felt, especially by those administrators whose job it is to convince and lead a reluctant staff into new and different directions.

A wide variation in management techniques existed in the school districts we visited in terms of an authoritarian versus permissive and centralized versus decentralized philosophy. And, in some districts it was difficult to sort out conflicting statements, just to determine the number of people employed by the district, in what capacity, and their relationships to each other. (This is even more striking when you realize that the school district is usually one of the largest, if not the largest, employer in a community. Few enterprises of similar size in the private sector know as little about the number and deployment of their personnel.)

One trend, although small, seems to be emerging. A number of districts are beginning to reorganize their staffs and are introducing professional management techniques. Five of the nine districts we studied in depth are moving actively in the direction of tightening central control over the schools, inserting intermediate layers of management between superintendent and principal, and drawing up organization charts, delineating lines of authority.

- In the small city school district previously mentioned, the superintendent who was able through public pressure to overturn a school committee who opposed change was unable to overcome the resistance to his programs of an entrenched and unresponsive administrative staff. His successor was hired by the new committee to manage the changes he had designed. A complete reorganization of the administrative staff began with an organization chart delineating authority and job responsibility on every level. (It is interesting to note that of the school systems visited and studied in depth, the majority had no organization charts, as such, and often no clear description of lines of authority and existing responsibility.) The new structure in this system did away with such problems as one assistant superintendent having eighty people reporting directly to him, or a teacher appraisal system in which some teachers waited ten years before being formally observed by a principal. The superintendent's immediate goal in this district is to prepare his staff to manage innovation.

This is not to say that principals in those districts are necessarily losing authority in operating their schools. As a matter of fact, another trend is to involve principals more in centralized decision-making. In one district, principals operate with full control over individual school budgets, and a great deal of flexibility in designing an educational program which suits their school's community. (At the other end of the scale though, in at least three districts the principals simply execute policies, without particularly influencing them. And in one district the effect of its bureaucratic style on the principals is a limitation of their authority, or a reluctance on their part to exercise the authority they do have.)

The computer as a management tool has taken hold in most of the districts visited. Of the nine districts analyzed in depth, six have in-house computer installations to perform various business functions (payroll, accounts payable, and receivable, record keeping, attendance). Other districts use outside service bureaus for these functions. Only a few districts are moving in the direction of more sophisticated uses of the computer in management decision-making on a district wide level. Yet in two or three districts we visited, the administration was actively involved in or planning for a management information system in which the computer would provide:

- Analysis of student records and school costs for a cost effectiveness appraisal of the educational product being delivered in that school or district.
- Diagnosis of student learning problems by students, schools, areas, economic levels, etc.
- Analysis of personnel records to determine needs and resources.
- Information for planning and programming budget decisions (for the board and the administration).

Managerial problems more often than not outweigh the educational problems in preventing the process of change. For the degree to which the key elements within the school district -- the superintendent, the administrative staff, the principals, the teachers, the school board and the parent leaders -- work together in a systematic way toward common objectives is one of the most important identifying characteristics in assessing a school district's chances for successful innovation.

A clear understanding of the roles and relationships must exist within and between the key groups. As already indicated, the superintendent, the principals, and the teachers are each by themselves influential in whether or not innovation will take place. In a lesser sense, in both the perception and the performance of their roles, the school board and the parent leaders also affect the cohesiveness of the school system in its approach to change.

- To the majority of members, the Board of Education's role is to be custodian of the school system. They see their responsibility as being primarily fiscal -- the shepherd of the funds, seeing that the dollars needed are raised, and that what is raised is spent appropriately. Most board members agreed that it is the function of the superintendent and his staff -- as the educational experts -- to establish the educational program, to initiate change, to introduce new ideas. So, when most board people talk about setting policy -- they are referring to a process in which the professional staff comes to the board with recommendations, which the board discusses and usually accepts (but occasionally rejects). And here, most often, the board's evaluation of education policy, or technology, or proposed changes boils down to an evaluation of their man -- the superintendent.

- Generally, parent leaders see their organizations as a liaison between the schools and the community. A number feel, too, that a major role played by the PTA is in gathering support for the bond issues and for the annual budget. The budget or tax vote, especially, represents a major effort in some districts. In one district visited, the PTA is making a major effort to train parent leaders and to inform a generally poor and disadvantaged population about their role in the school system. And, although most PTA leaders say that their organizations should not interfere in administrative matters in the schools, there is some evidence that they do, if not by direct action, certainly in withholding support from a program, or by publicly questioning the value of a program.

But overall, the parent leaders tend to have an irregular effect on the educational process. Their impact, in total, is mild. Of all the groups in the system, the parents' influence is the weakest. The role they play is mostly passive and even apathetic, until the district is embroiled in a crisis or a conflict. Then, parent associations become active and new partisan or pressure groups rise in response to the crisis or perceived threat. When the crisis or the campaign is over, the membership dwindles and the public's attention is directed elsewhere.

Communication defects and barriers add to a school district's inability to function as a cohesive system. Most superintendents discussed the difficulty they have communicating the objectives and problems of the school system to their staff, their boards and the community. Especially in those districts in which programs were rejected, budgets defeated, or bond issues failed to pass, the explanation most often given for the public's action was that "they didn't understand it; the communication was poor."

- In two school districts, learning programs utilizing computers were rejected in bitter public battles which overturned school boards, forced staff resignations and slowed down other innovative programs because irate parents believed their children were going to "be wired to a computer," or were going to be "used like guinea pigs in an experiment."

- In another district, the defeat of a bond issue for construction and expansion of high school facilities was attributed to the public's fear over rumors that 2000 new housing units would be constructed within the district. Yet the defeat means that 3000 students already on double session in the high school face triple sessions in two years or so, because of lack of facilities, and that even without new housing, the total number attending double sessions will more than triple in the next two years.

There is a lack of communication media in school systems, and a lack of technique in managing communications.

- School administrators tend to rely on local newspapers to carry their message to the public. In our own experience in interviewing in these districts, local newspaper stories were often scanty and incomplete. We used a number of sources to find out what really happened at a public meeting, the reasons behind the actions of the participants, and the real issues involved.

- Public meetings in general are poorly attended and publicized. And when a crisis does draw the public in large numbers to a meeting, unfortunately the atmosphere is so clouded with controversy, confusion and emotion that it is too late for communication.

- Internal staff meetings are considered inadequate, and even wasteful by many educators, because they are poorly planned and conducted (an assistant principal reading from a mimeographed agenda, for example) and because there are not enough contacts between levels or across lines to allow for a flow of information and ideas.

- Few school systems have systematic communication programs tailored to their needs and designed to meet specific objectives. More often than not administrators rely on either a piecemeal approach in general or blitzkrieg tactics in the face of a crisis.

Our studies in industry clearly demonstrate the value in committing an organization to an effective communication program. In education, as in industry, having a well informed staff and public has an impact on how change is accepted. Whether you are talking about an electronics manufacturer, a school system, or a service organization -- employees who feel better informed are consistently more favorable about virtually every aspect of their work than their less informed counterparts.

- A sample of teachers in one district, for example, who rated themselves as well informed on a number of scores were far more favorable about changes which have taken place in teaching methods, curriculum, relations between administrators and teachers, and relations between teachers and students than their colleagues who felt less informed.

#6: Astute Financial Management

> "Problems in my district? We run the gamut: neighborhood instability, teacher turnover and quality, race relations, motivational problems, and money, money, money." (A superintendent)

Financial resourcefulness, that is, the ability to secure funds from supplemental sources and to retain discretionary control over the funds, and a focus on getting the most for the money, is a striking characteristic of districts bent on change and innovation.

But a major problem in virtually every school district visited, say the administrators and board members, is that there just isn't enough money to pay for expanding systems and increasing salaries. They say the public is not willing (or able, say a few) to tax themselves to pay for these increases.

- Every suburban district we visited save one (the most conservative of those studied), has experienced one or more voter rebellions in school budget, millage, and bond issue defeats in the past three years. More often than not, the negative votes are based on an attitude of being "taxed to the limit" rather than on actual ability to pay. Further, the percentage of those who vote on these issues is usually less than a majority of the eligible voters. But the effect on school systems is often devastating to the staff and the educational program. The administration finds itself spending a disproportionate amount of time wooing favorable voters. And, in a number of school districts studied, the lack of techniques and knowledge about how to secure favorable voter reaction was as much a factor in the defeat as the negative attitudes of the vocal and active minority.

The source of school funding provides some insights to the financial dilemma school systems face. In the nine districts we studied in depth:

- The percent of local taxes supplying the funds ranges from a low of 17% in one district to a high of 80% in an affluent suburban district, and conversely, the percent of state allocation ranges from a high of 77% to a low of 18%.

- Districts which are able to supply the majority of funds from their own tax resources are able to maneuver more flexibly in areas of salary and size of instructional staff. They also seem to be able to initiate and implement change faster.

- Districts which rely on the state for the major portion of their funds are typically up to the limit in local tax burdens, and are therefore dependent on the equity of their state's formula, which in some cases can result in a lower per student allocation than wealthier or tax-rich districts receive. A common complaint of educators is that the usual formula of local property taxes and state distribution results in an unequal distribution of funds for public school education.

Interestingly, although the operating cost per student in these nine districts ranges from $416 to $1,287, the value received in educational terms, or the amount or quality of the innovative programs does not seem to be related to the dollars spent per student. The district spending the most was the one most committed to the status quo; it had made no significant changes in the two years between our visits.

The impact of federal funds can be significant, most administrators feel. Federal funds afford some relief and are almost universally welcomed, although some school districts display more ingenuity and skill than others in securing federal grants. Whether or not federal funds could have a major impact on freeing local school districts from their dependency on local or state funds, particularly for innovative programs, is viewed as doubtful in light of recent federal budget cuts. This factor concerns even some innovative-minded districts, who fear that they will start a program with federal funds and be left with a local cost burden if the government support is removed. Nevertheless, a number of administrators and board presidents feel that the Federal Government's role in education must increase significantly if schools are to change (or even survive, in some hard pressed areas).

Almost as serious as the lack of money is the fact that school systems are singularly lacking in cost effectiveness philosophy and procedures. Most school districts are not looking for ways to produce better education for the same or less money. Most administrators and board members and parents are simply looking for more money to do the same job.

- There is widespread lack of knowledge about costs. In a separate inquiry by this firm, into the functions and structure of an experimental learning program, the administrators and program directors in the six school systems visited were unable to document the real cost of the program but generally quoted the developer's price for the materials alone. The actual cost involved clerical, administrative, and additional teacher time, as well as materials. Further, they were unable to say what the cost per student (or class) was for the conventional program the innovation replaced.

- In one district the overwhelming majority of teachers surveyed about their knowledge of their district's budget, knew little or nothing about the source of school revenue, the average cost per student, the total expenditure, the amount of federal funds in the district, and the means by which the budget is approved. (54%, however, did feel well informed on the current teacher salary schedule.) The implications of such ignorance of school finances in the light of teacher militancy on salary demands are serious.

#7: Dissatisfaction With Status Quo

> "Change is triggered by dissatisfaction of various kinds. I am characteristically unhappy with our achievements. We've tried to use new techniques and approaches but we haven't changed the basic organism, the basic structure." (A principal)

Dissatisfaction with the status quo is the final and almost all enveloping condition for change. It is an attitude of constantly seeking to improve, to question, to evaluate the visible results of conventional approaches.

In the innovative school district, dissatisfaction with the status quo is translated into a quest for an individualized instruction system generally emphasizing these concepts:

- The breakdown of the organizational lock-step of grade by grade curricula, and the emphasis of multi-level, multi-media materials of instruction.
- The breakdown of the static size of the classroom, and the emphasis on a teacher-student relationship on an individual basis.
- The emphasis on learning behavior and mastery of materials, and diagnostic testing versus classroom discipline and traditional grading methods.

The problems school systems face in moving toward individualized instruction are a lack of money and a lack of information about the technology and the programs available. It is not uncommon to go from one school district to another in different parts of the country and find that a program or innovation highly popular and successful in one district is almost unknown in another. Some theories and programs (nongrading and team teaching, for example) are interpreted and implemented differently from district to district, too.

But most educators agree that the movement toward, and the desire, for individualized programs is a break from the past even though the theory itself or even components of a particular individualized instructional system are not necessarily new ideas in education.

What is new they say, is the technology, and the use of a systems approach to implement the theory.

- Technology, at its most complex level means the computer. But, as noted earlier, few school districts are yet utilizing the computer in a level of instruction beyond problem solving applications for high school students.

  Computer Assisted Instruction (CAI) is a successful experiment in a few districts. Key factors in the acceptance of CAI and its successful application, these educators say, are thorough preparation and involvement of the teaching staff, and the quality and relevance of the curriculum.

  The overriding point about technology in general is the widespread ignorance among all groups in the education establishment about what is available, what it costs, and whether it works. In fact, much of the widely publicized resistance to technology is based on lack of information rather than on a conscious rejection of the idea, the program, or the equipment.

Curriculum relevancy and reorganization is essential to the effort to individualize instruction.

- Educators are talking about continuous updating and review and moving away from expensive hard cover textbooks.

- One school district has completely reorganized its high school curriculum (involving the entire teaching staff in the process of revision) by expanding the number of courses, which can be taken in a flexible sequence, using multi-discipline approach, and enabling students to enroll on the basis of qualifications or preparation rather than by grade level.

- Other districts are designing courses of study which are relevant to their students' needs and circumstances (black literature, computer technology, consumer awareness, urban problems, vocational courses responsive to today's needs, to mention a few).

Some of the pressure to change has come from outside the establishment. Traditionally, the public school was the exclusive domain of the education establishment. Today, school systems find themselves involved with the Federal Government, business and industry, foundations, and militant community groups. The shifting balances between these influences and the schools have altered the status quo permanently in some areas of operations.

Parent militancy works both ways. In some districts, it is the parents who are most desirous of protecting and preserving the status quo. One survey result showed parents being judged most resistant to change and students most willing. In another school district, the administration deliberately avoided publicizing an extremely popular and successful independent study program in its high school in the certain knowledge that the parents would be horrified to learn that there were students who did not have to attend regularly scheduled classes, and would demand it be abolished. But in two urban school districts, it is the parents who are demanding change, who readily admit that their objective is to "shake up the system."

Integration struggles have forced school systems to alter their grade patterns, their school boards, their programs, and indeed, in some districts, their attitudes about the very survival of public education. Integration is a major problem in several of these districts although the perspectives and the tensions differ from city to suburb and from North to South. In areas which have lost their white population to other neighborhoods or to the suburbs, the emphasis of the educators tends to be on improving the educational program. Although the whites have left, the minority groups are not necessarily in control in these districts and the community representatives (self-appointed or genuine) are engaged in a struggle for power. The question to be resolved is who will design and direct the educational program and not necessarily how will the schools be racially balanced. In other districts (suburban mainly), the educators face increasing opposition to integration efforts which include busing students into or out of the district. And, some all white suburban districts have so far ignored the entire question despite the fact that their nearby cities have large minority populations.

On the whole, the entry into the education field of business, the foundations, and the Federal Government funding programs, is more welcomed than resented because of the financial relief and the research and development help being provided. The provision of federal funds, though, while a source of relief also implies a commitment to change and imposes new pressures to accelerate change, particularly under Title III programs involving sponsorship of experimentation and innovation. And, once in these programs, it is not easy to turn back.

Finally, the students themselves are a factor in altering the status quo in many districts. Most educators feel that students' attitudes and awareness have changed significantly in the past five or ten years. Some pose the question in terms of student discipline. This is more frequently cited as a problem by administrators in large city school systems in terms of controlling "difficult" student populations. But there is a changing attitude about the whole question of discipline as viewed by the administrators and as viewed by the students. Administrators, particularly principals, talked about the growing activism of students and their rising desires to change the way rules and regulations are established in schools. Principals say they have to spend more time dealing with these areas, and not all of them are altogether certain of how to proceed in response to the students' demands. Parents, too, are increasingly demanding schools either enforce or abandon regulations, depending on the community and its own value system. This conflicting parental involvement is demonstrated in one district where parents were demanding that the teachers prevail upon students to get their hair cut, and in another by parents demanding that the school district adopt a hands-off policy on dress regulations and the length of students' hair.

THE CONCEPT OF MEASURING INNOVATION IN A SCHOOL SYSTEM

In aiming then to identify whether or not the district or even its schools are innovative, one must examine them in at least several different dimensions:*

(1) Where the district or school falls on a scale of innovation ranging from traditional to innovative, in terms of the numbers and kinds of symbols of innovation found in that district or school.

(2) How rapidly or slowly the district or school accommodates change; the rate of innovation, the dynamics of innovation.

(3) The degree to which that district or school contains the necessary conditions or prerequisites for innovation.

In this schema, the absence or presence of the conditions or prerequisites for innovation act as a switch. When enough are missing, the circuit is broken, and movement from traditional to innovative is stopped. When enough of them are present, the path to innovation is open. On some types of innovation, the absence of any one of the conditions might break the circuit. On others, the force for innovation might be great enough to compensate for the absence of even several conditions.

So, the presence or absence of these conditions would predict the likelihood that innovation would occur. Measuring the dynamics of innovation characteristics of the school or district would enable a prediction to be made of the velocity, or rate of innovation -- the speed with which the change is likely to occur.

To make the concept of measuring and classifying school districts manageable, it is necessary to define the characteristics of a traditional school at one end of the scale, as well as those of the innovative school at the other end, and to enumerate the most important conditions for innovation. In each case, the list of factors are a direct outgrowth of the observations and views found in the school districts which have been studied.

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* See also chart, page 31.

The Traditional School

The characteristics of a traditional school system are typified by certain curriculum, methods, programs, organization and educational philosophies and goals which can be classified as traditional. (As noted, this can vary from place to place, and from time to time.) In school year 1969-70, a traditional school has most or all of these components (and a school district would be traditional when most or all of its schools fit this description):

The traditional schools, typically, have:

- Conventional classrooms, self-contained, fixed walls
- Orderly seating arrangements in each class
- Only partial utilization of physical plant (closing after normal school hours, and closed after the normal school year)
- In lower grades, teachers and students are static. In upper grades, teachers stay put and students come to them
- Controls on visitors (usually designed to discourage, rather than encourage)
- Autocrat administrator/disciplinarian

In the traditional classroom, there is usually:

- One teacher to a class (occasionally supported by an itinerant specialist in music, art, or reading in lower grades)
- No teacher aide
- A traditional grade pattern (viz: a lock-step relationship between age and grade)
- Tracking (generally grouping students according to ability)
- Few independent study programs for individual students
- Reliance on one or more conventional textbooks, which in essence define the curriculum for each major subject
- A requirement that teachers work from daily lesson plans
- An orientation to learning individual subjects in a compartmentalized fashion (i.e., separate courses in mathematics, science, history, civics, languages, English, etc. without integrating or relating them to each other)

- Lecture, and drill and practice as the teaching mode (rote learning)
- Instruction to large groups more often than to small groups (and little individualized instruction)
- Homework required in most or all major subjects
- Frequent tests and exams required, and weighted most heavily in assessing student achievement
- A conventional grading system (either letter or numeric grades), and retention if the pupil fails

In traditional schools, it's the student who passes or fails, not the teacher, or the system.

(The chart on page 31 describes the characteristics of the innovative school system in 1969-70.)

The second dimension to be considered in classifying a school or district as innovative or not, is the rate -- the dynamics -- of innovation.

- How many changes have been introduced?
- Is change a continuing or a sporadic and/or erratic process?
- How rapidly are changes implemented?
- How rapidly do they move from experimental to pilot to the accepted mode?
- How recently have the changes (at least the major ones) occured?
- Has the change pattern itself been speeding up, or slowing down?
- When opportunities for change exist, are they seized? (I.e., -- is a new school building likely to be different from, or more like, the ones before?)

To the extent that the changes are more frequent, more continuous, and more rapidly accomplished, that school or district may be viewed as being more innovative than another in which change is less frequent, less rapidly accomplished, and less recent.

9. Little or no independent study programs for individual students
10. Homework, tests
11. Partial utilization of school plant
12. Lesson plans required
13. Retention of students who "fail"
14. Reliance on one or more conventional textbooks
15. Oriented to learning individual subjects in a compartmentalized fashion
16. Lecture, and drill and practice mode of instruction

In traditional schools, it is the student who passes or fails, not the teacher, or the system.

5. Leadership in school:
   - Principals endorse, implement goals
   - Motivate teachers
   - Recognize and foster innovation, create environment in which innovation can take place
   - Involve their teachers

6. Financial:
   - Ability to secure outside funds, and retain discretion over use
   - Financial resourcefulness; focus on getting most for money

7. Dissatisfaction with the status quo, with the curriculum -- in its traditional form

- Professional association membership
- In-service/graduate courses for professional development
- Teacher association/union members and attitudes toward:
  - -- Improving salaries
  - -- Working conditions
  - -- Evaluation, professional standards
  - -- Belief in merit pay
  - -- Desire to change automatic tenure system
  - -- Number of students per class of less concern

5. Leadership in Schools
   - Introduces specific innovation, changes from traditional ways of doing things
   - Has committees in which teachers take primary role
   - Accessible -- open door for teacher/students
   - Frequent visits to classrooms
   - Formal teacher evaluations
   - Attends educational conferences and encourages teachers to do the same
   - Active program of community relations
   - Encourages strong student representation
   - Spends more time as instructional leader than administrator
   - Has a system for communications (meetings, bulletins, individual review of programs)

6. Financial
   - Cost effectiveness (relating educational value received for the cost)
   - Professional money management
   - Awareness of outside support resources
   - Discretionary funds available

7. Curriculum -- Substance and Content
   - Nongraded
   - Utilizing experts in and outside the system to develop curriculum
   - Setting detailed behavioral and learning objectives in the curriculum
   - Relevance to environment, and to needs of students, to the times
   - Introduction of new subjects (sciences, consumer education courses, sex education, black studies, occupational education, computers, etc.)
   - Continuous updating, review, revision of curriculum
   - Internally developed curriculum
   - Involvement of the teacher and students in curriculum development
   - Redesign of buildings to accommodate curriculum changes
   - Offering increased number of courses
   - Varying the length of the teaching day

THE DYNAMICS OF INNOVATION

- How many changes have been introduced
- Is change a continuing or a sporadic and/or erratic process
- How rapidly are changes implemented
- How rapidly do they move from experimental to pilot to the accepted mode
- How recently have the changes (at least the major ones) occurred
- Has the change pattern itself been speeding up, or slowing down
- When opportunities for change exist, do they seize them (i.e. - - is a new school likely to be different from the one before)

CHARACTERISTICS OF A TRADITIONAL SCHOOL SYSTEM

1. Traditional grade pattern
2. Generally group students according to levels of ability
3. One teacher classroom
4. Conventional classroom -- self-contained
5. Conventional grading systems
6. Visitors discouraged
7. Autocrat administrator/disciplinarian
8. Teachers and students are static/students go to teacher
9. Little or no independent study programs for individual students
10. Homework, tests
11. Partial utilization of school plant
12. Lesson plans required
13. Retention of students who "fail"
14. Reliance on one or more conventional textbooks
15. Oriented to learning individual subjects in a compartmentalized fashion
16. Lecture, and drill and practice mode of instruction

In traditional schools, it is the student who passes or fails, not the teacher, or the system.

- A communication climate in which ideas flow up and down the line
- Involvement of staff -- all levels -- in design and planning innovation

4. Characteristics of the teaching staff:
   - Ability to define role as that of enabling students to learn
   - Recognize individual students by their differences and design appropriate learning program for them
   - Understands community environment
   - Desire to be in policy-making decisions about curriculum, working environment
   - Wants to work with other teachers in planning, design and teaching
   - Welcomes assistance of paraprofessionals
   - Strong sense of professionalism, teaching regarded as career
   - Continue professional development, in-service and graduate courses
   - Feeling of self-confidence and success

5. Leadership in school:
   - Principals endorse, implement goals
   - Motivate teachers
   - Recognize and foster innovation, create environment in which innovation can take place
   - Involve their teachers

6. Financial:
   - Ability to secure outside funds, and retain discretion over use
   - Financial resourcefulness; focus on getting most for money

- Having a variety of communication media
- Managing communication
- Extending participation into the classroom -- committees
- System for testing, review and revision of innovations
- Participation across levels and between levels
- A Management Information System

4. Characteristics Of The Teaching Staff And The Teaching Environment

   a. Role:
      - Diagnose student needs, learning difficulties
      - Prescribes or designs and plans learning programs for the individual student
      - Sets objectives for the lesson, for students, and measures the accomplishment of them
      - Gives the students a role in designing the learning program

   b. Methods:
      - Team teaching
      - Inductive/discovery method
      - Inter-disciplinary approach
      - Can accommodate to different instructional methods, depending on need
      - Independent study programs
      - Uses paraprofessional in the instructional process
      - Flexible, modular scheduling

   c. Accepts As An Integral Part Of The Instructional Process:
      - The computer in problem solving, CAI
      - Audio-visual equipment
      - Learning and resource centers
      - Television
      - Other machines, devices to individualize instruction

   d. Use Of Such Programs As:
      - IPI
      - ITA
      - FLES
      - PSSC physics
      - SMSG math
      - SRA reading

   e. Professional Outlook:
      - Attends educational conferences, seminars (voluntary versus compulsory)
      - Professional association membership
      - In-service/graduate courses for professional development
      - Teacher association/union members and attitudes toward:
        -- Improving salaries
        -- Working conditions
        -- Evaluation, professional standards
        -- Belief in merit pay
        -- Desire to change automatic tenure system
        -- Number of students per class of less concern

5. Leadership in Schools
   - Introduces specific innovation, changes from traditional ways of doing things
   - Has committees in which teachers take primary role
   - Accessible -- open door for teacher/students
   - Frequent visits to classrooms
   - Formal teacher evaluations
   - Attends educational conferences and encourages teachers to do the same
   - Active program of community relations
   - Encourages strong student representation
   - Spends more time as instructional leader than administrator
   - Has a system for communications (meetings, bulletins, individual review of programs)

6. Financial
   - Cost effectiveness (relating educational value received for the cost)
   - Professional money management
   - Awareness of outside support resources
   - Discretionary funds available

7. Curriculum -- Substance and Content
   - Nongraded

CONDITIONS/PREREQUISITES FOR INNOVATION
IN A SCHOOL SYSTEM

1. An articulated set of goals or objectives for the district and schools.

2. Leadership of the district:
   - Superintendent is supporter and implementer of goals
   - Has defined personal objectives
   - Leader and motivator of the system's personnel
   - Can recognize and foster innovations and create environment in which innovation takes place

3. Management of the district:
   - Organization of district to permit implementation of goals
   - A communication climate in which ideas flow up and down the line
   - Involvement of staff -- all levels -- in design and planning innovation

4. Characteristics of the teaching staff:
   - Ability to define role as that of enabling students to learn
   - Recognize individual students by their differences and design appropriate learning program for them
   - Understands community environment
   - Desire to be in policy-making decisions about curriculum, working environment
   - Wants to work with other teachers in planning, design and teaching
   - Welcomes assistance of paraprofessionals
   - Strong sense of professionalism, teaching regarded as career
   - Continue professional development, in-service and graduate courses
   - Feeling of self-confidence and success

SYMBOLS OF INNOVATION IN A SCHOOL SYSTEM

1. The Goals
   - Developing the self-concept of students
   - Preparing individuals for society, whatever role they're capable of
   - Giving each individual the opportunity to learn what he needs according to his own capacity
   - Recognizing that education must provide for individual differences
   - Recognizing that certain parts of the environment may be hostile to learning and developing alternate approaches to change the environment
   - Recognizing that the learning needs of today's society have changed
   - Relates goals to community and its needs; believes in relevancy of education

2. Leadership Of The District
   - Superintendent dominates the school board, has its support
   - Positive reactions by system's personnel to superintendent as a leader
   - His presence attracts people to the system and encourages them to remain
   - His philosophy is reflected by others in the system
   - Committed to his goals far more than to his job

3. Management of the District
   - Reorganization of departments and functions to accomplish goals
   - Preparation of staff to manage innovations
   - Recognition that professional managerial and administrative skills are necessary
   - Systems approach to operating district
   - Establishing two-way communication programs between teachers, students community, administration
   - Having a variety of communication media
   - Managing communication
   - Extending participation into the classroom -- committees
   - System for testing, review and revision of innovations
   - Participation across levels and between levels
   - A Management Information System

4. Characteristics Of The Teaching Staff And The Teaching Environment

   a. Role:
      - Diagnose student needs, learning difficulties
      - Prescribes or designs and plans learning programs for the individual student
      - Sets objectives for the lesson, for students, and measures the accomplishment of them
      - Gives the students a role in designing the learning program

   b. Methods:
      - Team teaching
      - Inductive/discovery method
      - Inter-disciplinary approach
      - Can accommodate to different instructional methods, depending on need
      - Independent study programs
      - Uses paraprofessional in the instructional process
      - Flexible, modular scheduling

   c. Accepts As An Integral Part Of The Instructional Process:
      - The computer in problem solving, CAI
      - Audio-visual equipment
      - Learning and resource centers
      - Television
      - Other machines, devices to individualize instruction

   d. Use Of Such Programs As:
      - IPI
      - ITA
      - FLES
      - PSSC physics
      - SMSG math
      - SRA reading

CHARACTERISTICS OF A TRADITIONAL
SCHOOL SYSTEM

1. Traditional grade pattern
2. Generally group students according to levels of ability
3. One teacher classroom
4. Conventional classroom -- self-contained
5. Conventional grading systems
6. Visitors discouraged